

1. (Currently amended) A mutual solvent system for use in acidizing and cleaning up an oil or gas well, the mutual solvent system consisting essentially of water soluble and water and oil soluble components, the mutual solvent system comprising a solution of:

an alcohol that is water soluble present in the amount of at least 5% by weight of the mutual solvent system;

an ester that is water and oil soluble present in the amount of at least 5% by weight of the mutual solvent system;

an aqueous acid comprising water and acid, the aqueous acid being present in an amount at least 5% by weight of the mutual solvent system; and

a solvent, that is at least one of a ketone that is water and oil soluble and a cyclic ether that is water and oil soluble.

2-9. Cancelled.

10. (Previously presented) The mutual solvent system of claim 1 in which the ester is a C₂ – C₁₀ ester.

11-13. Cancelled.

14. (Previously presented) A solvent system for use in acidizing and cleaning up an oil or gas well, the solvent system comprising:

an alcohol that is water soluble present in the amount of at least 5% by weight of the solvent system;

an ester that is water and oil soluble present in the amount of at least 5% by weight of the solvent system;

an aqueous acid comprising water and acid, the aqueous acid being present in an amount at least 5% by weight of the solvent system; and

tetrahydrofuran present in the amount of between 10% and 50% by weight of the solvent system.

15. (Cancelled)

16. (Previously presented) The solvent system of claim 14 in which the aqueous acid is present in the amount of between 10% and 50% by weight of the solvent system.

17. (Previously presented) The solvent system of claim 16 in which the acid is hydrochloric acid.

18-29. Cancelled.

30. (Previously presented) The mutual solvent system of claim 1 in which the solvent is a ketone.

31. (Previously presented) The mutual solvent system of claim 1 in which the solvent comprises a C₃ – C₁₀ ketone.

32. (Previously presented) The mutual solvent system of claim 31 in which the solvent comprises methyl ethyl ketone.

33. (Previously presented) The mutual solvent system of claim 32 in which the methyl ethyl ketone is present in the amount of between 10% and 50% by weight of the mutual solvent system.

34. (Previously presented) The mutual solvent system of claim 1 in which a ketone is present in the amount of between 10% and 50% by weight of the mutual solvent system.

35. (Previously presented) The mutual solvent system of claim 1 in which the aqueous acid is present in the amount of between 10% and 50% by weight of the mutual solvent system.

36. (Previously presented) The mutual solvent system of claim 1 in which the acid is hydrochloric acid.

37. (New) The mutual solvent system of claim 1 in which the solvent is present in an amount at least 5% by weight of the solvent system.

38. (New) The mutual solvent system of claim 1 in which:
the alcohol is present in the amount of between 5% and 50% by weight of the mutual solvent system;
the ester is present in the amount of between 5% and 50% by weight of the mutual solvent system; and
the ketone is present in the amount of between 10% and 50% by weight of the mutual solvent system.

39. (New) The mutual solvent system of claim 38 in which:
the alcohol comprises methanol present in the amount of about 12.5% by weight of the mutual solvent system;
the ester comprises methyl acetate present in the amount of about 12.5% by weight of the mutual solvent system;
the aqueous acid comprises 15% hydrochloric acid and is present in the amount of about 50% by weight of the mutual solvent system;
the solvent comprises methyl ethyl ketone present in the amount of about 25% by weight of the mutual solvent system.

40. (New) The mutual solvent system of claim 38 in which:
the alcohol comprises methanol present in the amount of about 8.25% by weight of the mutual solvent system;
the ester comprises methyl acetate present in the amount of about 16.75% by weight of the mutual solvent system;

the aqueous acid comprises 15% hydrochloric acid and is present in the amount of about 50% by weight of the mutual solvent system;

the solvent comprises methyl ethyl ketone present in the amount of about 25% by weight of the mutual solvent system.

41. (New) The mutual solvent system of claim 38 in which the alcohol comprises methanol, the ester comprises methyl acetate, the acid comprises hydrochloric acid and the solvent comprises methyl ethyl ketone.

42. (New) The mutual solvent system of claim 1 excluding an emulsifying agent.

43. (New) The mutual solvent system of claim 1 in which the mutual solvent system consists essentially of the alcohol, the ester, the aqueous acid, and the solvent.

44. (New) Use of the mutual solvent system of claim 1 in a well operation.